



WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee		Licensee Representative	
Hamlet of Grise Fiord		David Watsko	
Licence No. / Expiry		Representative's Title	
3BM-GRI1520		Hamlet Foreman	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
June 28, 2017		Jonathan Mesher	
Activities Inspected			
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Other: Water Discharge	<input checked="" type="checkbox"/> Other: Municipal	<input type="checkbox"/> Reclamation
<input type="checkbox"/> Fuel Storage			

Conditions:		A - Acceptable	C - Concern	U - Unacceptable	NA – Not Applicable	NI – Not Inspected
Water Use		Site Conditions		Haz/Mat Management		
	Condition	Comment		Condition	Comment	
Intake/Screen	A		Water Management Structures	C	1	Storage
Flow Measure. Device	A		Culverts / Bridges	A		Spills
Source: Melting Glacier			Drainage	A		Spill Plan
Water Use:	A		Erosion / Sediment	A		
Recirculation (y /n)	NA		Mitigation Measures	A		Administrative
			Reclamation Activities	A		Records
			Materials Storage	A		Reports
Waste Disposal			Signage	A		Plans
Waste Water	C	2				Notifications
Solid Waste	U	3	Monitoring		Other	
Hazardous Waste	<u>U</u>	3	Sample Collection / Analysis	C		
*The number in the comments field will correspond with specific comments provided below.						
Samples taken by Inspector:			Location(s):			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						

SECTION 1	<input checked="" type="checkbox"/> Comments (s.____)	<input type="checkbox"/> Non-Compliance with Act or Licence (s.____)	<input type="checkbox"/> Action Required (s.____)
Inspectors Statement			
On June 28, 2017, a water licence inspection was conducted at the Hamlet of Grise fiord, Qikiqtani Region, Nunavut. Sites inspected included:			
<div>1. The Water Supply Facility (WSF): the Community drinking water is obtained from a glacial runoff pond. The WSF consists of the Water source, two water storage tanks, a heating system, boilers to supply heat, a chlorination system, and trucks to deliver the Water to the Community.</div> <div>2. The Sewage Disposal Facility (SDF) consists of a non-engineered, unfenced sewage lagoon. The sewage lagoon has a capacity of 19,360 m3.</div> <div>3. The Solid Waste Facility (SWF) consists of a main Municipal Solid Waste area (MSW) and a bulky waste area. The MSW area contains items such as organic waste, paper, paperboard and other paper products, plastic, rubber, leather, diapers, cans, glass, ceramic, wood and wood products, etc. The bulky waste area contains construction and demolition wastes, white goods (such as large household materials like fridges, stoves, clothes washers and driers, televisions), scrap metal and scrap vehicles, snowmobiles, engines, and tires. Hazardous waste material is found within both areas.</div>			
Inspection			
<div>1. The Water Supply Facility (WSF):</div> <div><div>a) During the inspection the Licensee representative expressed plans to increase the capacity of the collection pond. This modification must be approved by the board as stated in PART E: Item 1 of the water licence 3BM-RUT1520.</div><div>b) This facility has been modified in the last 5 years without proper approval and does not appear to the inspector to be capable of handling the spring melt due to the over flow at the time of the inspection (See figure 1).</div><div>c) The inspector is requesting that;<div><div>i. The WSF facility be inspected by an engineer to better address the capacity issue,</div><div>ii. The Licensee provide the board with the required documentation for the current WSF as set out in part E Item 4 of the licence,</div><div>iii. The licensee provides plans for the future modification of the WSF.</div></div></div></div>			



2. Sewage Disposal Facility (SDF):

- a) On the North West corner of the SDF there appeared water had been flowing into the facility causing erosion. (See figure 2).
- b) A concern about this facility is the culvert that diverts water along the East berm wall. This culvert is diverting water that may cause erosion on the berm wall.
- c) The inspector is requesting that this facility be inspected by an engineer in order limit erosion and properly divert water away from this facility.

3. The Solid Waste Facility (SWF):

- a) The Solid Waste Facility is once again found to be unsatisfactory condition to the inspector.
- b) Issues on site are as follows;
 - i. No attempt to control windblown litter.
 - ii. Barrels of hazardous waste do not appear to be segregated or stored in such a manner as to prevent the deposit of deleterious substances into any Water. See figure 3 to 5 for examples of unsegregated hazardous waste.
 - iii. Culverts and ditches up gradient of the facility divert water directly through the SWF instead of around the SWF. See figure 6 for a photo of a water management structure diverting water into the municipal refuse.
 - iv. Barrels of Hazardous material were found to be leaking on to the ground at the time of the inspection. This is to be cleaned up as soon as possible and remediated as set out in the solid waste operations and maintenance plan.
- c) While reviewing the solid waste operations and maintenance plan provided to the Nunavut Water Board in 2014, it was noted that;
 - i. The Licensee is not using the site highlighted as the “metal Dump site” in Fig-2: Site Locations of the Water licensed Facilities on page 6 of the solid waste operations and maintenance plan.
 - ii. The hazardous waste is not kept separate from each other or stored in a way to prevent the mixing of these materials as stated as “imperative” in section 6.2, page 14 of the solid waste operations and maintenance plan.
 - iii. The solid waste operations and maintenance plan states that the hazardous waste will be stored up to 5 years. This unsegregated waste has been identified in the past by inspector A. Keim, in a 2006 inspection report he stated “Inspection of the Solid Waste Management area found little or no segregation of materials. Three areas containing Drums of waste materials were noted (approx. 100 drums)”. There is now over 400 barrels of unknown hazardous waste being stored in this unlined facility with no apparent segregation from municipal refuse.
- d) The inspector is requesting that this facility be inspected by an engineer in order to develop a plan to; segregate hazardous waste, remove hazardous waste from the site, and divert water away from this facility.

SECTION 2	<input type="checkbox"/> Comments (s.__)	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence (s.__)	<input checked="" type="checkbox"/> Action Required (s.__)
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As stated in PART A ,Section 3 of the water licence 3BM-GRI1520: “Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*.”.

The Licensee was in contradiction of the following terms of the licence 3BM-GRI1520 at the time of the inspection conducted on June 28, 2017;

Part D

- 8. The Licensee shall segregate and store all hazardous materials and/or Hazardous Waste within the Solid Waste Disposal Facility in such a manner as to prevent the deposit of deleterious substances into any Water, until such a time that the materials have been removed for proper disposal at an approved facility.
- 9. The Licensee shall implement measures to control wind-blown litter at the Solid Waste Facility.

Part E

- 1. The Licensee shall submit to the Board for approval in writing, for-construction design drawings, stamped and signed by a qualified Engineer registered in Nunavut, at least sixty (60) days prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain Water or Wastes.
- 4. The Licensee shall, within ninety (90) days of completion of Modification or Construction of facilities and/or infrastructure associated with the project, submit to the Board a Construction Summary Report along with stamped as-built plans and drawings, providing explanation to reflect any deviations from the for construction drawings, taking into account construction and field decisions and how they may affect the performance of engineered facilities.

I am requesting the Licensee develop a plan to address the issues outlined in this report and to have the Hazardous waste segregated before the Water Licence inspection in the summer of 2018.



Photo Log

Date	Authorization	Camera	Inspector
June 28, 2017	3BM-GRI1520	Sony Cyber shot	J.Mesher



Figure 1: WSF overflow



Figure 2: SDF infiltration and erosion



Figure 3: unsegregated hazardous waste



Figure 4: unsegregated hazardous waste



Figure 5: unsegregated hazardous waste



Figure 6: water diverted through the SWF



Figure 7: hazardous material leaking into the environment.



Figure 8: hazardous material flowing into the environment.

Licensee or Representative	Inspector's Name
	Jonathan Mesher
Signature	Signature
	Original on File
Date	Date
	June 28, 2017

Office Use Only: Follow-up report to be issued by Inspector

☐ Yes ☒ No